IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Norman L. Holy
Serial Number:	10/516,900
Filed:	December 3, 2004
For:	WHALE-SAFE ROPE
Art Unit:	3643
Examiner:	Darren W. Ark
Atty doc:	147-04

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to a non-final Office Action dated May 26, 2006, to which a response is due by August 26, 2006, kindly amend the above-identified patent application as follows:

Discussion of cited prior art:

All of the claims, claims 1- 17, stand rejected under 35 USC 103(a) as obvious in view of combinations of four references: Anderson et al. (US 5913670); Morris et al. (US 3697474) Lamb et al. (US 3705074); and Herrington (US 2081146).

Anderson (5913670) teaches breakaway links installed in a buoy line 22 tied between a surface floating buoy and a bottom-sitting fishing structure (such as a sunken gillnet 23 and a sunken lobster trawl 24). Anderson's line 22 (rope) is full strength, except where a break-away link is located. As shown in Anderson, Fig. 2, a breakaway link must be either at the surface or at the bottom adjacent his sunken fishing structure.

In actual practice, the fishermen place the breakaway link normally only at the top of the rope (near the surface), between the buoy and the major length of the rope. The theory being that when a whale becomes entangled in the rope, the buoy will break off and there will be a better chance of the whale shedding the rope. The limitation is, that both governmental and private watch and reporting services have indicated, that there appears to be no reduction in whales killed because of the use of such ropes as Anderson's.

A further disadvantage of the Anderson rope is that a hauling machine must be stopped while a link is removed or otherwise guided around the pulley sheaves of the hauling machine. This situation is the same, regardless of which embodiment of the Anderson break-away link is employed: Figs. 1, 3, 4, 5 and 6. It is clear from Anderson's own recitation that each of his links is either rigid, requiring a knot in the rope, or has a metal hook and eye also requiring a knot in the buoy rope. The sole exception is Anderson's final embodiment, Fig. 6, which is a reduced diameter cutout section 63.

The rigid links will not travel through a hauling machine and must be removed to preclude damage. This is a time consuming operation and may also be a dangerous operation in bad weather. The Anderson cutout section 63, Fig. 6, will have its cut outer layer "fray", or

ball up, when it "hits" a hauler. This reduces the effective working life of the rope, may cause a premature break, and can result in lost catch.

The Anderson cutout 63 section, is in a sea worthy rope 22, which is twisted/ braided rope. When the outer strands/cover of a braided rope are cut as suggested by Anderson, the rope will quickly unravel and break. When Anderson cuts 63 his braided rope the cover portion fails as there are no continuous outer strands running the entire length of the rope. When the rope 22 is hauled the cut cover will tend to travel away from the cutout 63 and "bunch-up" and therefore change the working diameter of the rope. This rope would soon have to be discarded.

Thus, the major portion of the Anderson rope 22 <u>must</u> be free of breakaway links or the hauling operation would be overly labor intensive and time consuming. As a result when a whale becomes entangled in the Anderson rope 22 it will break <u>only</u> at the surface or at the sea bottom or both. This leaves the entire working length of the rope 22 in tact and remaining around a whale. This is not a good solution to the problem. If a broken link at either end of the working length of the rope becomes caught, the whale is often lost.

Morris (3707074) addresses the use of inorganic fillers in thermo plastic materials. Such particulate materials such as clays, calcium carbonate, barium sulfate, zinc oxide, titanium dioxide have been used in thermo plastic materials as "coloring" agents.

Morris teaches the treatment of polymer compositions with "organo-clays" in the manufacture of polymeric materials for goods including ropes (col. 1, lines 38-47). Morris starts with inorganic particular materials including clays, calcium carbonate, barium sulfate, etc. Morris then <u>requires</u> that the inorganic materials be treated with a organo titanium compound (col. 3, lines 39- 47). Morris is not particular about the size and shape of his inorganic filler particles, and is silent on size and distribution. Morris merely <u>stipulates</u> that the filler material surfaces <u>must</u> have at its surface reactive hydroxy groups and/or about 0.1 to about 2 weight

percnet based upon the filler of absorbed water (col. 4, lines 54-63). Morris is not concerned with any specific chemical nature of his fillers (col. 4, lines 59-60).

What Morris is adamant about is that fillers do not change the properties of his thermo plastic polymer material. Morris does not want his fillers to change the strength, molding characteristics and other physical properties of the thermo plastic polymer material (col. 3, lines 9-10). In fact, any reduction in the strength of the resultant filler/thermo plastic material is unacceptable to Morris (col. 1, line 60 to col. 2, line 2). Morris has no direct application to the fishing industry and recites no intended purpose for his invention in a sea water environment or the ocean fishing industry.

Lamb (3705074) teaches the preparation/manufacture of "fibrillated" yarn. Fibrillated yarn is yarn with splits of fine strands. A "fibril" is a short fiber. What Lamb teaches is the "frizzing", i.e., the creation of fine split strands in a polymer yarn. Lamb uses mechanical working to create fibrils on a monofilament such as a polyamide, a polyester, or polyolefin (col. 1, lines 22- 30 and col. 3, lines 30-42). Lamb has no direct application to the fishing industry and recites no intended purpose for his invention in a sea water environment or the ocean fishing industry.

Herrington (2081146) teaches a trawl net 11 having a head rope 12 to which the upper leading edge of the net is secured (hung), a foot rope 13 which hangs below the head rope and to which the lower leading edge of the net is secured (hung), and a side wings 15 with otter boards 16 to hold the net open as it is towed. While Herrington is concerned with a by-catch of unmarketable small fish and trash, Herrington is silent on whales.

Herrington is silent on whether his net 11 can hold as much accumulative weight as his upper and lower towing ropes 12, 13. Herrington's drawing does not show the lines representing his two tow ropes 12, 13 as being any heavier than the strands of his net 11 at sections 18 and 20. Any discussion by the Examiner about this difference is inapplicable to the

present invention. A net has <u>many strands</u> which act together to support the weight of the catch. Sometimes a net can hold more weight than its tow rope (Herrington's ropes 12, 13).

No consideration is given by Herrington to whether a whale entangled in the netting of his trawl net, would it die. Certainly the weight of a whale would be distributed over a large region of a net's mesh. There is no reason to assume that the mesh would break when a whales weight is distributed over a large area. Herrington's net has its mesh strands close enough to catch one and one-half pound haddock and cod fish (col. 2, line 60-64). What would be the difference if the mesh net could hold 20 tons of haddock or cod or a 20 ton whale?

Both the National Marine Fisheries Service and the National oceanic and Atmospheric Administration (NOAA) have documented by-catches of cetacean species in trawl nets. It is well-established that if a whale is caught in a trawler net, the animal nearly always dies.

Porpoise and whales do get caught in trawl nets of the type shown by Herrington, entangle themselves, and die. It is well documented by governmental agencies that thousands of dolphins and porpoises die each year in U.S. fishery waters in trawl nets. The relative strength of a head rope to the strength of an individual strand or mesh filament in a large net is immaterial. The assumption raised by the Examiner is untenable. One of ordinary skill would not look to combine Herrington with any of the other references.